

CLAIMS

What is claimed is:

1. A cervical facet resurfacing implant comprising:
a superior implant having an articulating surface and a fixation surface and configured for secured placement on a resurfaced superior articular facet of a selected cervical vertebra; and
an inferior implant having an articulating surface and a fixation surface and configured for secured placement on a resurfaced inferior articular facet of a cervical vertebra immediately above the selected cervical vertebra such that the articulating surface of the inferior implant interacts with the articular surface of the superior implant.
2. The cervical facet resurfacing implant of claim 1 wherein the superior implant and inferior implant are each generally disk-shaped.
3. The cervical facet resurfacing implant of claim 1 wherein the superior implant further comprises a tab extending from the generally disk-shaped portion of the superior implant.
4. The cervical facet resurfacing implant of claim 3 wherein the tab is configured for attachment to the lateral mass of the selected cervical vertebra.
5. The cervical facet resurfacing implant of claim 4 wherein the tab is attached to the lateral mass of the selected cervical vertebra with a screw.
6. The cervical facet resurfacing implant of claim 3 wherein the tab and the disk-shaped portion of the superior implant form an angle of from about 110 degrees to about 160 degrees.
7. The cervical facet resurfacing implant of claim 1 wherein the inferior implant further comprises a tab extending from the generally disk-shaped portion of the inferior implant.

8. The cervical facet resurfacing implant of claim 7 wherein the tab is configured for attachment to the inferior articular process of the cervical vertebra immediately above the selected cervical vertebra.

9. The cervical facet resurfacing implant of claim 7 wherein the tab is attached to the inferior articular process of the cervical vertebra immediately above the selected cervical vertebra with a screw.

10. The cervical facet resurfacing implant of claim 7 wherein the tab and the disk-shaped portion of the inferior implant form an angle of from about 10 degrees to about 70 degrees.

11. The cervical facet resurfacing implant of claim 1 wherein at least one of the superior implant and the inferior implant comprises a surface fixation mechanism.

12. The cervical facet resurfacing implant of claim 11 wherein the surface fixation mechanism comprises at least one of: at least one peg, at least one pip, at least one fin, ridges, and at least one screw hole.

13. The cervical facet resurfacing implant of claim 12 wherein the surface fixation mechanism comprises multiple regions and wherein each of the regions has at least one ridge oriented in a different direction than the other regions.

14. The cervical facet resurfacing implant of claim 1 wherein the fixation surface of at least one of the inferior implant and the superior implant has at least one of: a porous coating, a porous onlay material, a biologic coating, a surface treatment, and a material facilitating ingrowth of bone.

15. The cervical facet resurfacing implant of claim 1 wherein the articulating surface of at least one of the inferior implant and the superior implant is composed of at least one of: cobalt-chromium alloy, ceramic, UHMWPE, pyrolytic carbon, and Ti/Al/V.

16. The cervical facet resurfacing implant of claim 1 wherein the inferior implant and superior implant each range from about 1 mm thick to about 6 mm thick.

17. The cervical facet resurfacing implant of claim 1 wherein the inferior implant and superior implant each range from about 3 mm in diameter to about 14 mm in diameter.

18. The cervical facet resurfacing implant of claim 1 further comprising a trans-lateral mass fixation mechanism for securing the inferior implant to the inferior articular facet.

19. The facet implant of claim 18 wherein the trans-lateral mass fixation mechanism comprises at least one of: a translaminar screw, a bolt and a fixation pin.

20. A facet implant comprising:

a generally disk-shaped superior implant having an articulating surface and a fixation surface and being configured for placement on a resurfaced superior articular facet of a selected cervical vertebra, the superior implant having a tab extending from the generally disk-shaped portion of the superior implant, the tab being configured for secured attachment to the lateral mass of the selected vertebra; and

a generally disk-shaped inferior implant having an articulating surface and a fixation surface and being configured for placement on a resurfaced inferior articular facet of a cervical vertebra immediately above the selected cervical vertebra such that the articulating surface of the inferior implant interacts with the articular surface of the superior implant, the inferior implant having a tab extending from the generally disk-shaped portion of the inferior implant, the tab being configured for secured attachment to the inferior articular process of the cervical vertebra immediately above the selected vertebra.

21. The cervical facet resurfacing implant of claim 20 wherein at least one of the superior implant and the inferior implant comprises a surface fixation mechanism.

22. The cervical facet resurfacing implant of claim 21 wherein the surface fixation mechanism comprises at least one of: at least one peg, at least one pip, at least one fin, ridges, and at least one screw hole.

23. The cervical facet resurfacing implant of claim 20 wherein the fixation surface of at least one of the inferior implant and the superior implant has at least one of: a porous coating, a porous onlay material, a biologic coating, a surface treatment, and a material facilitating ingrowth of bone.

24. The cervical facet resurfacing implant of claim 20 wherein the articulating surface of at least one of the inferior implant and the superior implant is composed of at least one of: cobalt-chromium alloy, ceramic, UHMWPE, pyrolytic carbon, and Ti/Al/V.

25. A method for providing articulating surfaces for vertebrae facet joint articular facets of comprising:

- creating a space between a superior articular facet of a selected vertebra and an inferior articular facet of a vertebra immediately above the selected vertebra;

- using a rasp to prepare an articulating surface of the inferior articular facet for an inferior implant;

- using a rasp to prepare an articulating surface of the superior articular facet for a superior implant;

- fixing the inferior implant on the inferior articular facet such that a fixation surface of the inferior implant interacts with the articulating surface of the inferior articular facet; and

- fixing the superior implant on the superior articular facet such that a fixation surface of the superior implant interacts with the articulating surface of the superior articular facet;

wherein the articulating surface of the superior implant and the articulating surface of the inferior implant are configured to articulate with one another.

26. The method of claim 24 wherein each of the steps are repeated on articular facets on a contralateral side of the vertebrae facet joint.

27. The method of claim 24 wherein the created space is begun with a curette.

28. The method of claim 24 wherein the created space is a space sufficient for using a rasp on an articulating surface of an articular facet.

29. The method of claim 24 wherein the created space ranges from about 2 mm to about 5 mm.

30. The method of claim 24 wherein multiple rasps of increasing thickness are used to prepare the articulating surfaces of the superior and inferior articular facets.

31. The method of claim 24 wherein the articulating surfaces of the superior and inferior articular facets are prepared such that the created space is increased to accommodate the superior and inferior implants.

32. The method of claim 30 wherein the articulating surfaces of the superior and inferior articular facets are prepared such that the shape and dimension of superior articular facet resembles the superior implant and the shape and dimension of the inferior articular facet resembles the inferior implant.

33. The method of claim 30 wherein the created space is increased such that it ranges from about 4 mm to about 15 mm.

34. The method of claim 24 wherein the articulating surfaces of the superior and inferior articular facets are prepared such that a bleeding bone bed is created to facilitate bone ingrowth.

35. The method of claim 24 wherein the inferior and superior articulating surfaces are prepared by the same rasp.

36. The method of claim 24 wherein at least one rasp is configured to cut when moving in a first direction, but not when moving in a direction opposite of the first direction.

37. The method of claim 24 further comprising securing the inferior implant to the inferior articular facet with a trans-lateral mass fixation mechanism.